

K274Y103



Energy
Management

Actuator for sector mixing valves of R586R DN40 units

Datasheet
0848EN 10/2024



The K274Y103 actuator is used to control the sector mixing valves of R586R DN40 distribution and regulation units.

➤ Versions and product codes

PRODUCT CODE	POWER SUPPLY	USE
K274Y103	24 V - 50 Hz	R586RY153 (DN40) R586RY163 (DN40)

NOTE. To install the actuator on R586R DN40 units use the P274Y001 kit pre-assembled on the units.

➤ Technical data

- Type of command: 0..10 V or 4..20 mA
- Rotation angle: 90°
- Opening time: 60 s
- Maximum torque: 15 Nm
- Power consumption: 5 W
- Protection class: II
- Insulation class: IP65
- Ambient operating temperature range: -5÷55 °C
- Ambient humidity range: 95 %
- Storage temperature range -20÷70 °C

Operation

NOTE. The actuator K274Y103 can be coupled to the thermoregulation KLIMAbus for the command in the automatic opening/closing of the mixing valve.

At the first start the actuator sequentially performs the following operations:

- 1) Reading of the red cable for possible reversal of the "0 point" (duration of 2 sec.).
- 2) Detection of the "0" position.

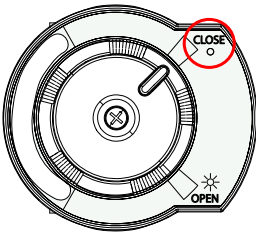
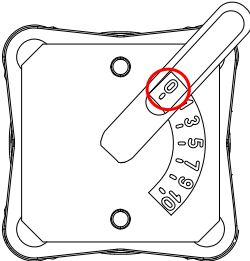
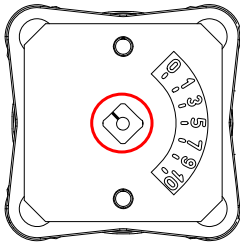
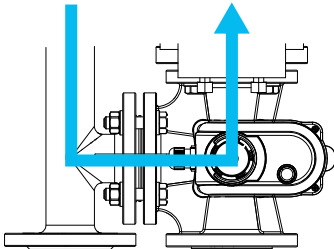
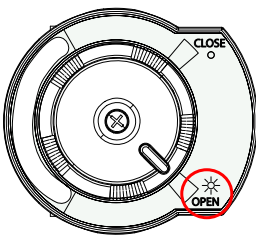
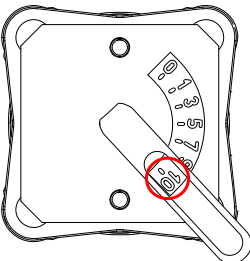
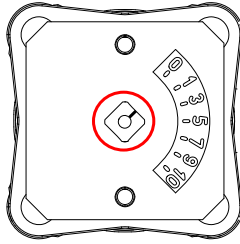
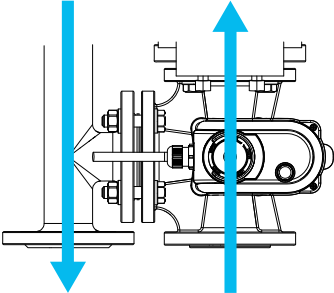
Those settings that make up the system initialization, will be saved by the actuator.

Subsequent start-ups require only reading the red cable.

If there is an inversion of the "0 point" the actuator again carry out the detection of the "0 position", in the contrary case, this is positioned in reference to the input signal (0..10 V / 4..20 mA).

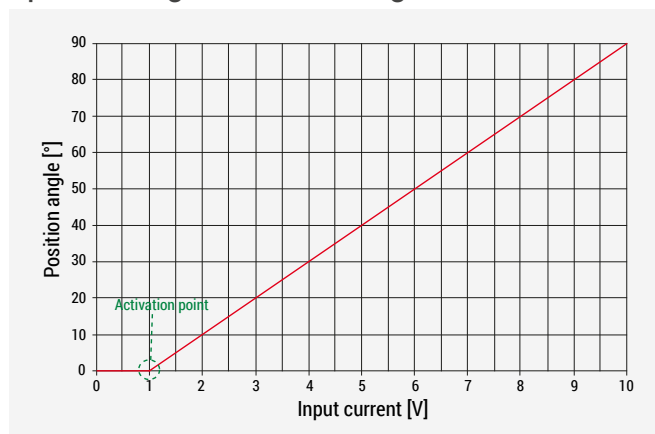
Operation with sector mixing valve of R586R DN40 units

For correct operation of the K274Y103 actuator with R586R DN40 units, the **red cable** must be connected.

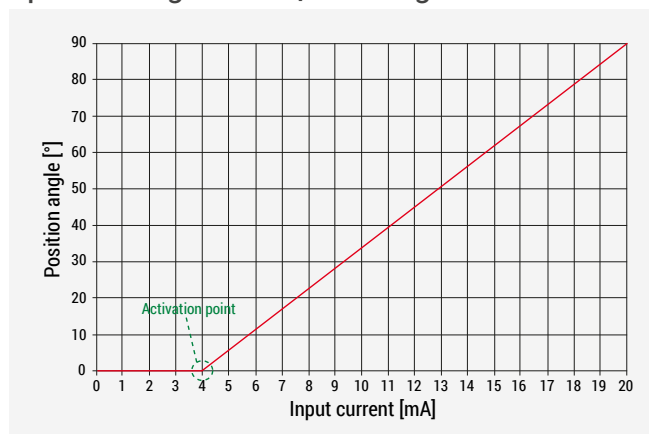
RED CABLE CONNECTED				
Voltage (0..10 V)	Actuator knob position	Valve plate and lever position	Rod indicator position*	Sector valve position
0 V				
10 V				

* The rod indicator is not directly visible but is located under the connection kit pre-assembled on the R586R unit.

Operation diagram with 0..10 V signal



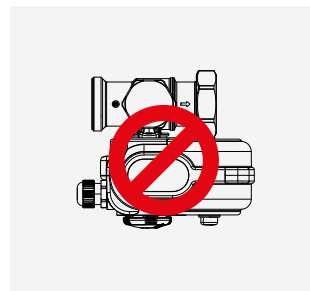
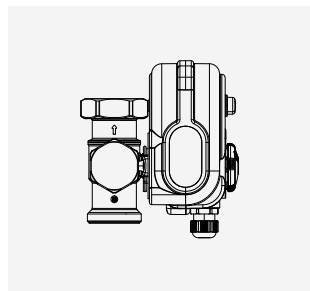
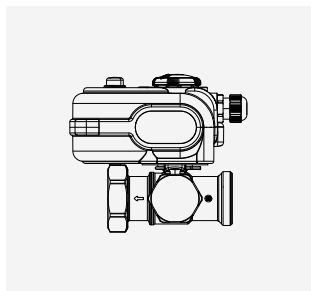
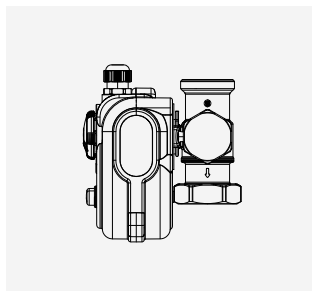
Operation diagram with 4..20 mA signal



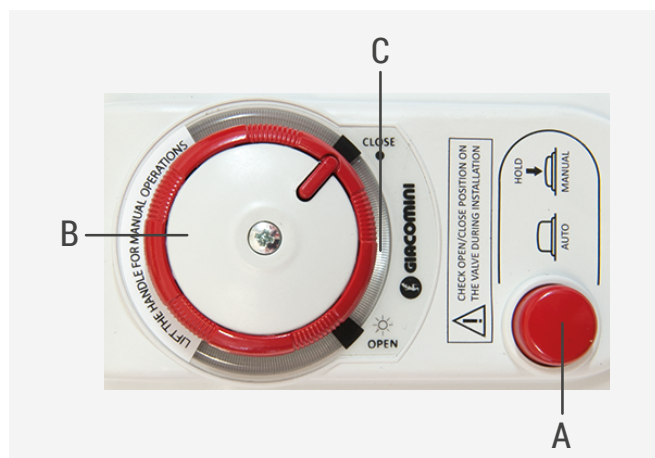
Installation

The K274Y103 actuator must be installed in a horizontal or vertical position with the cover facing upwards, in a dry, protected and easily-accessible location for any future maintenance.
Do not cover with insulating material.

Allowed positions



Manual command



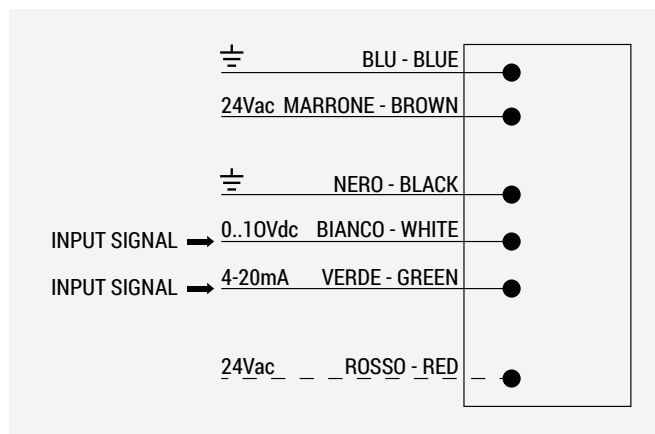
To initiate the actuator manually, keep the red "A" button pressed down and turn the red "B" knob to the desired position.

The led "C" indicates the status of the actuator function - see section on "led operation".

Electrical connections

▲ WARNING. Make sure the power supply voltage is disconnected while the connections are being carried out.

▲ WARNING. Carry out and check the electrical connections before powering the system. Short circuits or cables connected improperly may cause permanent damage to the electrical components of the actuator..



WIRE COLOR	FUNCTION
Blue + Brown	Power supply
Black + White	0..10 Vdc command
Black + Green	4..20 mA command
Red	If connected at 24 Vac phase, invert zero point: • Operation without red cable connected: 0 V = actuator CLOSE = valve in by-pass 10 V = actuator OPEN = valve open

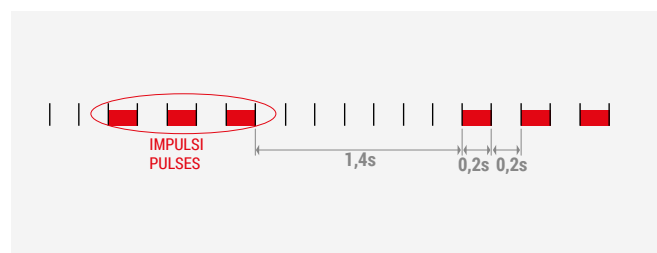
Installation on R586R DN40 units sector mixing valve

Before installing the K274Y103 actuator on the sector mixing valve of the R586R DN40 units, make sure that:

- the red cable of the actuator is connected.
- the actuator knob is positioned on the CLOSE indication. Otherwise, move it manually while holding down the manual release button.
- the mixing valve lever is positioned on the 0 indication. Otherwise, move it manually.

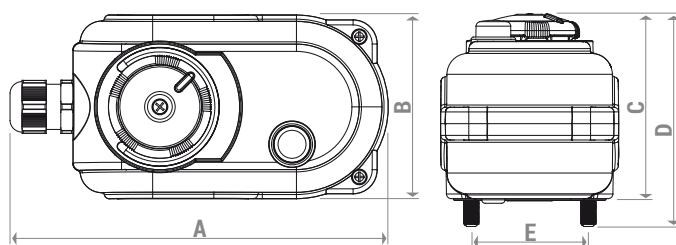
Led operation

By the led "C" the actuator signals its operating status using the pulse sequence shown below.



N° OF PULSES	STATUS
0 (led OFF)	Waiting for input signal - Achievement angle request
1	Actuator in the closing phase
2	Actuator in the opening phase
3	Finding "0" position
4	Anomaly (failure position of the actuator - error of the position sensor)
5	Mechanical interface abnormality

Dimensions



PRODUCT CODE	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
K274Y103	157	76	80	91	50

Reference standards

- EC mark
- Directive EMC 2014/30/EC
- Low Voltage Directive 2014/35/EC

Product specifications

K274Y103

Rotary actuator for controlling the sector mixing valves of R586R DN40 in HVAC systems. Power supply 230 V - 50 Hz. Type of command: 0..10 V or 4..20 mA. Opening time: 60 s. Maximum torque: 15 Nm. Power consumption: 5 W. Protection class: II. Insulation class: IP65. Ambient operating temperature range: -5 to 55 °C. Ambient humidity range: 95%. Storage temperature range: -20 to 70 °C. EC Marked. Complies with EMC Directive 2014/30/EC and Low Voltage Directive 2014/35/EC.

⚠ Safety Warning. Installation, commissioning and periodical maintenance of the product must be carried out by qualified operators in compliance with national regulations and/or local standards. A qualified installer must take all required measures, including use of Individual Protection Devices, for his and others' safety. An improper installation may damage people, animals or objects towards which Giacomini S.p.A. may not be held liable.

♻ Package Disposal. Carton boxes: paper recycling. Plastic bags and bubble wrap: plastic recycling.

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